



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx BVS 17.0101X

Issue No: 0

Certificate history:

Issue No. 0 (2018-08-01)

Status: **Current**

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Date of Issue: **2018-08-01**

Applicant: **Jacob GmbH Elektrotechnische Fabrik**
Gottlieb-Daimler-Straße 11
71394 Kernen
Germany

Equipment: **Ex Equipment cable gland type PERFECT plus Ex-cable gland K100-1xxx-zz-EX,
PERFECT plus EMC-Ex-cable gland K102-1xxx-zz-EX**

Optional accessory:

Type of Protection: **Equipment dust ignition protection by enclosure "t", Equipment protection by increased safety "e"**

Marking:

Ex eb IIC Gb
Ex tb IIIC Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr Christiane Sultan

Position:

Deputy Head of Certification Body

Signature:
(for printed version)

Date:

01.08.18

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

DEKRA EXAM GmbH
Dinnendahlstrasse 9
44809 Bochum
Germany

 **DEKRA**
On the safe side.



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Manufacturer: **Jacob GmbH Elektrotechnische Fabrik**
Gottlieb-Daimler-Straße 11
71394 Kernen
Germany

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0
IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2
IEC 60079-7 : 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

[DE/BVS/ExTR18.0052/00](#)

Quality Assessment Report:

[DE/BVS/QAR08.0013/07](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Subject and Type

See Annex

Description

The Ex Equipment cable glands PERFECT plus Ex-cable gland and PERFECT plus EMC-Ex-cable gland are made of brass. The PERFECT plus Ex-cable gland consists of dome nut, lamellar insert, sealing ring, gland body with connecting thread and O-ring sealing. The PERFECT plus EMC-Ex-cable gland consists of the parts of the PERFECT plus Ex-cable gland and is additionally equipped with a contact spring. The Ex Equipment cable gland PERFECT plus Ex-cable gland and PERFECT plus EMC-Ex-cable gland are used for fixed cable entry in electrical equipment with type of protection Increased Safety "eb" and Protection by enclosure "tb". They are installed in equipment with threaded holes and clearance holes. The PERFECT plus EMC-Ex-cable gland is also applicable for the installation of cables with EMC shielding. Common accessory: Hexagonal locknut made of brass.

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:

The type PERFECT plus EMC-Ex-cable gland is only usable for EMC shielding connection and not for any equipotential bonding conductor connection. The cable glands are tested with a reduced tensile force (25 %) in accordance with clause A.3.1 of IEC 60079-0 and may only be used for fixed installation of Group II or III apparatus. The user shall ensure adequate clamping of the cable. The cable gland size M12 is only usable for low risk of mechanical danger (drop height 0.4 m with 1 kg mass) and shall be protected against higher impact energy levels.

Annex:

[BVS_17_0101X_Jacob_Annex.pdf](#)



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Subject and Type

Ex equipment cable gland type

PERFECT plus Ex-cable gland K100-1xxx-zz-EX

PERFECT plus EMC-Ex-cable gland K102-1xxx-zz-EX

Subject	K	*	**	-	*	xxx	-	zz	-	EX
1	2	3	4	5	6	7	8	9	10	11

Number Description

- 1: General type designation
 - The names of series in different languages
 - PERFECT plus Ex-cable gland
 - PERFECT plus EMC-Ex-cable gland
- 2: Component
 - K = Cable gland
- 3: Material
 - 1 = Brass, nickel-plated
- 4: Series designation, for example
 - 00 = PERFECT plus Ex-cable gland
 - 02 = PERFECT plus EMC-Ex-cable gland
- 5: Hyphen
- 6: Connecting Thread
 - 1 = metric thread according EN IEC 60423
- 7: Connecting size xxx, for example
 - 020 = metric thread M20x1,5
- 8: Hyphen
- 9: Variants zz, for example
 - 00 = Connecting thread standard length (6,5 mm to 10 mm)
 - 50 = Connecting thread long (> 10 mm)
- 10: Hyphen
- 11: Application area
 - EX = Explosive atmospheres

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Parameters

Connecting thread size according EN IEC 60423	metric: M12x1,5 to M63x1,5
Connecting thread length	Standard length: 6,5 mm to 10 mm, long: > 10 mm Connecting threads which are longer than the standard length or the variant long are also approved, see instruction.
Minimum wall thickness	Threaded holes 4 mm
Suited for cable diameters	Subject to nominal size, 3 mm to 48 mm
Suited for equipment with risk of mechanical danger	Subject to nominal size, 4 J: M12x1,5 7 J: M16x1,5 to M63x1,5
Service temperature range	-40 °C to +85 °C
Degree of protection according EN IEC 60529	IP66 / IP68 (10 bar, 30 min.)

Type / Series	Size	Sealing and anchorage range	Installation torque		Clearance hole
			Gland body	Gland body	
			[Nm]	[Nm]	[mm]
K100-1012-00-EX	M12x1,5	3 - 7	3	3	12 ^{+0,2}
K100-1016-00-EX	M16x1,5	6 - 10	3	3	16 ^{+0,2}
K100-1020-00-EX	M20x1,5	8 - 13	3	3	20 ^{+0,2}
K100-1025-00-EX	M25x1,5	10 - 17	6	6	25 ^{+0,2}
K100-1032-00-EX	M32x1,5	11 - 21	12	12	32 ^{+0,2}
K100-1040-00-EX	M40x1,5	16 - 28	14	14	40 ^{+0,2}
K100-1050-00-EX	M50x1,5	21 - 35	20	20	50 ^{+0,2}
K100-1063-00-EX	M63x1,5	34 - 48	25	25	63 ^{+0,2}

Type / Series	Size	Sealing and anchorage range	Installation torque		Clearance hole
			Gland body	Dome nut	
		[mm]	[Nm]	[Nm]	[mm]
K102-1012-00-EX	M12x1,5	3 - 7	3	3	12 ^{+0,2}
K102-1016-00-EX	M16x1,5	6 - 10	3	3	16 ^{+0,2}
K102-1020-00-EX	M20x1,5	8 - 13	3	3	20 ^{+0,2}
K102-1025-00-EX	M25x1,5	10 - 17	6	6	25 ^{+0,2}
K102-1032-00-EX	M32x1,5	11 - 21	12	12	32 ^{+0,2}
K102-1040-00-EX	M40x1,5	16 - 28	14	14	40 ^{+0,2}
K102-1050-00-EX	M50x1,5	21 - 35	20	20	50 ^{+0,2}
K102-1063-00-EX	M63x1,5	34 - 48	25	25	63 ^{+0,2}